



# Personalized Wellness Videos (PWV)

Prepared for:



# A. Project Proposal Cover Page

To: Israel-U.S. Binational Industrial Research and Development Foundation

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**Project Title: Personalized Wellness Video (PWV)** 

Project Duration 18 months Project Budget: 2,000,000 \$

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# C. Executive Summary

#### **PWV Project - Executive Summary**

	Israeli Company	U.S. Company
Company name	Telesofia Medical LTD (TSM)	Tribune Content Agency, LLC (TCA)
Company locations (headquarters and relevant division address, including full street address, city, state)	151 Ibn Gabirol St. Tel Aviv 67443 Israel	435 N. Michigan Ave., TT 1400 Chicago, IL 60611, USA
Company website	www.telesofia.com	www.tribunecontentagency.com
Year established	2011	1918
Revenues: most recent fiscal year 2014	To be disclosed	\$21.5 million
Increase / (Decrease) over previous year	Increase	1 % - accounting after MCT acquisition
Number of employees	10	80
Ownership (Public / Private)	Private	Owned by Tribune Publishing Public (NY:TPUB)
Percentage ownership of the company by the other company	None	None
Relationship of the companies – - Parent/Subsidiary - Common Ownership - No common relationship - Other	No common relationship	
Number of previous BIRD projects	0	0

Company Registration Number: 514613710 36 - 1880355

Expected project title	Personalized Wellness Videos (PWV)
Estimated project budget	\$2.0M
Expected project duration	18 months

#### **Abstract**

Telesofia Medical (TSM) and Tribune Content Agency (TCA) will join their expertise in health care technology and content distribution in order to develop, produce, and deploy a personalized wellness video solution.

Health content is a huge industry. One in every 20 organic search results is health-related, according to Google February 2015 data. By using videos and a personalized approach, we will deliver wellness content that is relevant and specific to the viewer, thus increasing the educational power and the effectiveness of such content.

Our product will offer a tailored health assessment tool, which will result in a series of branded personalized videos, explaining to the patient the conclusion of the assessment, and providing personal wellness videos with relevant medical information. The solution aims to bring existing medical content into the digital era in a way that is

clear and engaging to the patient, as well as to increase adherence and improve patient satisfaction.

By combining resources in this project, TSM (technology, content) and TCA (distribution, content) will maximize their potential by addressing new market segments using new business models, and providing cutting edge technology that is innovative in the health care industry.

#### **Company Background**

#### Telesofia

TSM's proprietary platform allows health care providers and other parties to automatically generate branded personalized educational videos for patients. The videos are tailored to the specific patient, directed to low literacy level, and available on devices with no need to install any special software or codecs. The fully branded videos are sent to patients using text (SMS) or email messages, and can be embedded in health portals and mobile apps. The service results in increased patient understanding and improved adherence.

TSM's platform currently supports a wide variety of applications, such as those explaining proper use of medication, directing preparations for medical procedures and providing discharge instructions. Videos can be personalized to each patient based on their demographics, lab results, specific medical instructions, specific product used, and more. The videos are easily integrated into existing workflows and platforms. The current products provide value to many parties ranging from the payer to the patient, through targeted, personalized patient communication. Current markets include: health care providers, pharmaceutical companies, pharmacists, and payers.

TSM's founder/CEO, Rami Cohen, MD (TAU), is a physician with 17 years of experience in the Internet industry (Mirabilis/ICQ/AOL). The management team is comprised of Internet and pharma/medical device industry veterans with over 17 years of experience each, and the company has a prestigious technology and medical advisory board.

TSM has received strong and positive feedback from many in the health care industry, including magazines such as Forbes, Inc., and BizzVenue, the latter of which named it the "No. 1 Israeli Startup to Watch for 2015." In 2014, it won the first prize both in the MIXiii Biomed and the Digital Health IL conferences.

TSM is working on protecting its IP, has filed one PCT patent application in January 2014, and is expecting to file additional patent applications on other aspects of its technology.

#### **Tribune**

TCA, part of the Tribune Publishing family, is a premium content creator and distributor since 1918 with over 2000 clients in nearly 100 countries. It either owns or manages the licensing and syndication rights to hundreds of internationally acclaimed titles such as The Los Angeles Times, Chicago Tribune, New Scientist, Foreign Affairs and The Atlantic, as well as health and medical content from Harvard Health, Mayo Clinic and Reuters Health News Wire service.

The Tribune Publishing family is a diversified media and marketing solutions company with a portfolio of iconic news and information brands that includes 10 award-winning daily titles, more than 60 digital properties and more than 150 verticals in key markets. Tribune Publishing also offers an array of customized marketing solutions, and operates a number of niche products. The group ended 2014 with 3.2 million digital

registered users, and launched its next-generation digital experience and responsive mobile apps. Its yearly operating revenues are in the \$1.7B range.

Harvard Health and Mayo Clinic are two of the world's leading authorities in consumer health and patient education, and produce some of the most trusted health and well-being content written by their combined 15,000+ doctors. The content from these two premium sources has allowed Tribune to expand its client portfolio to include private health insurance companies, hospitals, governments, mobile telecom providers, pharmaceutical companies, and more.

Additionally, TCA manages the rights to Mayo Clinic's Healthy Living Portal, which is optimized for mobile, tablet, and PC use. It utilizes Mayo Clinic's medical expertise and focuses on implementing sustainable behavior changes in order to reduce the risk of long-term illnesses and chronic conditions. Users complete a health assessment to identify strengths, risks, and concerns. The resulting data can be used to create a highly personalized wellness plan. Additionally, medical history and pre-populated values of blood pressure, blood sugar, cholesterol, triglycerides, weight, height and hemoglobin A1c levels are taken into consideration in order to place people into different risk stratification groups that are unique to Mayo Clinic.

Mayo Clinic uses this product as part of its healthy living online solution for defined populations. The product is marketed specifically to corporate HR departments to enhance the quality of life and productivity of their employees as well as potentially lowering the costs associated with company provided health care plans. Pricing is based on number of users and implementation rates among the targeted populations. TCA currently sells Mayo Clinic content to government agencies, telecom distributors, app developers, mobile service providers, health care providers, and hospital groups. Pricing models vary by market and can consist of straight annual licensing fees, revenue share models, or a hybrid model of guarantees against revenue shares.

#### The Innovation

Existing health assessment tools provide the users with health risk scores based on their medical information. For example, Mayo Clinic's health assessment tool relies on questions relating to medical history, health status, productivity, health care visits, preventive services, physical activity, nutrition, stress, sleep, tobacco, alcohol, emotional health, safety, etc.

The personalized wellness product in this project will offer a tailored health assessment tool, based on existing health assessment algorithms. In addition, it will result in a series of branded personalized relevant videos. The videos will explain to the patient the conclusion of the assessment, and provide relevant wellness and health content. The videos will be generated and delivered to the users based on a schedule, to allow receipt of relevant information on a timely manner, and to maintain interest. The videos can be branded (e.g., show the logo of the health care provider sending the video). They will be personalized on different levels, depending on the desired level of sophistication - whether it is a basic or a pro version - and the available information. Personalization can be based on patient demographics (gender, age, and location), test results, lifestyle, background medical condition, etc. The health assessment tool itself can vary based on differences between users – different questions and different algorithms can be employed.

Such a product will combine existing assessment tools and medical content licensed by TCA. The product will support better understanding of the relevant medical information by the users, better engagement, better adherence to the recommendations provided, and better patient satisfaction.

In addition, the creation of the educational videos through a centralized platform will allow access to statistical data as to the utilization of the videos, for example - which videos were viewed, how many times, on which devices, etc. Such information, not available to TCA through their current methods for distribution, allows the use of new business models in commercializing the product under this project. Moreover, the use of such a platform establishes TCA as a player in the digital era.

#### **Collaborative Relationship**

TSM developed an innovative platform for creating and delivering personalized videos to simplify and explain medical information. TCA has licenses to health assessment algorithms and prestigious medical content, in addition to market expertise and distribution power in the health education field. TSM and TCA will work together to create health assessment tools and produce relevant wellness content in the form of personalized videos.

The companies will create the personal wellness videos utilizing various levels of personalization, according to the desired level of sophistication (basic or pro versions) and the amount of personal information available.

During product development, TSM will provide the platform technology and the knowledge related to health literacy and creation of medical videos, and produce all relevant video content. TCA will provide content development support, a prestigious brand name to back the content, and product distribution power. TSM and TCA will jointly commercialize the product. TSM will be responsible for technical delivery and maintenance as well as product and sales support. TCA will support business development efforts and create sales opportunities.

Financing of the project will be split 70%-30% between TSM and TCA, respectively. In addition to the financing from BIRD, TSM and TCA will bear all costs associated with the project.

Through this project, TCA will gain access to breakthrough technology that enhances its existing products and allows it access to new segments of the market and new business models. TSM will gain access to prestigious medical content, the support of an established U.S. company with international reach, and assistance in accessing the market, including new segments of the market. In addition, both companies will earn financial gain from the sale of the final product.

#### **Commercial Potential**

The basic version of the personalized wellness tool will be distributed through media companies (websites ranging from newspaper websites to specialists' health portals), health applications, manufacturers of wearable devices, mobile telecom providers, and other health-related outlets for consumer use. The distribution to these channels will be supported by the contacts and market presence of the Tribune group of companies. Thanks to the way the videos are delivered through TSM's platform, compared to the current form of content provision by TCA, we will be able to utilize new business models, such as PPV or income from sponsorships and advertisements, to be shared with the distribution channels (websites, apps, etc.).

TCA currently does not have any revenues based on such a business model. Looking at an example for the market, WebMD's 2014 annual revenues from sponsorships and advertisements in medical content is over \$450 million (goo.gl/zUE8Oe). The sponsorship and advertisement opportunities which will be offered through our product

will be highly targeted, as they are already based on a personal assessment, and thus will be more valuable in the market (CPMs may be over \$100).

The Pro Version of PWV will require the medical data of the patient for enhanced personalization. The Pro Version will be distributed similarly to the way the current health assessment tool is distributed by TCA – through hospitals, health insurance companies, HR departments of large organizations for wellness plans, and other large players in the wellness industry. TCA's existing relationships will be useful, and the offering of a PWV Pro Version of the current health assessment tool will lead to a much larger market share for its current activity.

#### D. The Innovation

Video is the fastest-growing online content format. Forrester Research indicates that "People retain 58% more with both visual and auditory content" than with any other type of content. According to a Forbes report, 59% of users prefer to watch video instead of reading text, and 80% are watching more online video today than they were a year ago. The PWV video offering aims to replace or amend current assessment tools, and supplement current medical content, which in most cases come as long pages of medical jargon. Videos have the power to visually show patients their health assessment and explain it in a faster and clearer manner. As it is indicated in "Touching lives through mobile health-Assessment of the global market opportunity" (published by PWC Feb 2012) "mobile access is becoming almost ubiquitous worldwide" including "Solutions across the Patient Pathway - Wellness, Prevention, Diagnosis, Treatment and Monitoring, entail direct touch-points with patients. For Mobile Health Care the ultimate solution is video streaming.

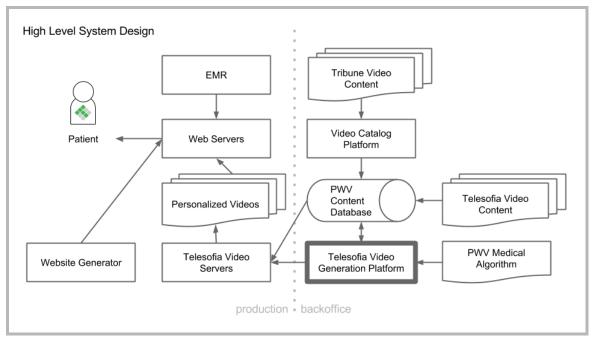
When combining the power of video as a storytelling medium with personalization strategies, we have the ability to provide information in video that is personalized to the viewer based on its needs, interests, profile, and current behavior. Because the story is personally relevant to the individual, is engaging enough to keep his attention. It proactively answers the most frequently asked questions, and provides a reason to adopt digital channels first to change future behaviors. Stories can be told in a series of personalized videos that are triggered by time-based stages, allowing for an ongoing conversation that can drive behavior changes that yield a true transformation.

PWV intends to combine TSM proprietary technology for creation of an "on the fly" composite video and new algorithms for conversion of users' personal demographics and medical information into inputs to the video generator. Those demographics and medical inputs will enable the creation of a personalized video being composed of video clips, explaining medical information relevant to that user.

Current health assessments are limited in terms of the information they provide, and none currently deliver the results in a highly personalized video format. For example, the results of a standard health assessment may indicate that due to various lifestyle choices, the risk of developing type 2 diabetes is highly probable, but little to no information will be provided to the user as to how to remedy this. Through the PWV, we will deliver some of the latest patient education and health content available via TCA's various content providers, which may include Harvard Health, Mayo Clinic, and Reuters Health, with more sources currently being sought.

Additionally, the wearable market is exploding, with shipments forecast to grow from 22 million in 2014 to 135 million in 2018 (CCS Insight). Fitness trackers are the fastest-growing category, but the scope of the market is almost unlimited. Wearable and health-related devices provide an interesting insight into ones overall health and daily activity, such as steps walked, resting heart rate, weight, sleep quality and duration, etc. But beyond the "numbers," they don't provide much insight or guidance as to how one can improve specific areas of concern, such as lowering resting heart rate, improving sleep quality, reducing stress, losing weight, etc. This effectively means that a significant percentage of a health/wearable company's clients may lose interest in the device(s) (within six months, according to discussions with Fitbit), or they will use another company's products/services in conjunction with theirs. The PWV will offer a turn-key solution by incorporating the devices' information and adapting the PWV results accordingly, thus keeping users engaged and increasing the likelihood of improved and measurable lifestyle changes.

#### **PWV-System Description**



PWV-High Level System Design

The objective of the PWV System is to bring personalized, high-quality wellness videos to the patients' computer desktop, mobile device or any other online device. The system will use video content provided by TCA, video content prepared by TSM, and TSM's video generation platform and techniques.

The system is comprised of two major logical clusters:

- Back-Office Systems: for the aggregation and preparation of the dynamic video content.
- Front-End, Patient-Facing Systems: for the delivery of the dynamic personalized videos to the patients.

# **Back-Office Systems**

The back-office system facilitates the flow of information and video content into the video database, where it is stored to be used later in the generation of the dynamic videos.

The back-office is comprised of the following primary parts:

- TCA Video Library: A large set of video clips demonstrating various health and wellness topics.
- Video Catalog Platform: A secure online web server that enables video and content editors to upload and catalog TCA video content into the database. It also allows authorized medical staff to review the content for errors and omissions.
- TSM Video Content: Video clips that are designed to wrap and extend the TCA video clips so that the end result is a set of cohesive, personalized video clips.

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 Medical Protocols and Algorithms: A computer script that describes a specific medical or wellness concept in a way that considers various input parameters in order to produce personalized scripted video clips.

• TSM Video Generation System: A set of servers, applications and APIs that orchestrate all the content described above in order to make the dynamic video content accessible to other systems (e.g., for the purpose of delivery to the patients).

#### **Front-End Systems**

The primary purpose of the front-end systems is to make the personalized and dynamic video clips available and accessible to patients. The system receives two main inputs: video content and patient parameters.

The web-serving part of the system is designed in a way that allows flexibility in choosing the delivery method.

The primary parts of the system are as follows:

- TSM Video Servers: These servers are responsible for handling parameterized requests and returning the URL needed for streaming the personalized videos.
- Web Application Servers: This element of the system holds several different implementations, but all implementations serve the same purpose: provide the patient with a user interface to enter his or her details (if needed) and view their personalized videos. In a simplified version of the system (the Basic Version), the website serving the user interface is a 3rd party website that has an embedded HTML widget served by TSM. In a more advanced implementation (the Pro Version), the website serving the content is a result of a special Website Generator system.
- Website Generator: This online web system allows interested third parties such as hospitals and health-related web portals - to generate a branded website (or a web widget, in the simplified version of the implementation) that accepts patientrelated input and serves the personalized videos.
- EMR System: In the Pro Version, the system aims to provide the patient with a seamless experience. Therefore, wherever possible, patient details are extracted from the health provider's electronic medical record system so that the user does not have to input the details manually. The system connects to these EMR systems using web APIs.

#### TSM contribution to the innovation:

TSM is a world leader in personalized video for health information and was recently nominated by Gartner as a "Cool Vendors for healthcare providers"- TSM has developed the technology for tailoring video and multimedia content to the specific patient.

The unique service is capable of automatically combining several video clips in real time, and generating a single, personalized and seamless video output ready to be served to any standard, Internet-connected device.

The process is done on commodity hardware, with minimal storage requirement, and is able to interface with different systems and end-devices. Today there is no other company that provides auto-generated, personalized videos for health information. **TSM** offers the first system that allows automated, personalized patient videos.

On PWV, TSM intends to develop innovative technologies to create personal wellness video based on content created by leading medical institutes, using TCA libraries.

PWV Pro Version will enable TCA to enhance its Premium Health Information Library ("PHIL") and to solve customers' unique needs. PHIL will house all of TCA's content related to health, from contributors like Mayo Clinic. This content will be presented on a permission website, allowing the client to search, save, download, and purchase the content that the client has licensed. The Pro Version is due to become a white label offering of websites for the clients. These sites will include branding from client and contributors, as well as present the content through a streamlined user interface. These sites will have the same functionality in terms of search, collaboration tools, and content distribution as the main PHIL site. These branded sites will allow the clients to use the information provided to effectively reach their target audiences.

# **Competition Entrance barriers:**

TSM product status – TSM has already the basic platform for on-the-fly video creation. Having this patented platform creates a **technological barrier** for other companies which don't have yet such a solution.

TSM's position in the market – TSM has already a few customers and partners, and others that have shown interest in the company's products. Having crossed the barrier of securing the first customer in a relatively short time also presents a significant barrier to potential newcomers. In addition, there are awards that TSM won which ease its market penetration and increase its recognition around the world.

All intellectual property rights to the technologies and the product are owned by TSM. TSM filed a PCT patent application in January 23, 2014, with priority date in January, 2013. The patent application is quite broad, and more focused applications are expected to be filed in the national phase.

TSM's PCT patent application "System and Method for Flexible Video Construction" was filed and submitted in Israel (PCT/IL 2014 050085, Priority US 61756040). This invention relates to a system and method for dynamic and real-time video construction, and in particular to such flexible construction of a personalized video clip. A patent survey which was done by New-Tone patents office (<a href="http://www.new-tone.co.il">http://www.new-tone.co.il</a>) has shown that it is patentable and there are no known published patents that TSM is going to violate. As the construction of a personalized video clip is a new and innovative area, it may be assumed that there is a potential for more patents. The company will check if there are other patents it can file based on its research and development.

#### **Regulatory and Technical Standards**

The product is planned to meet the following standards:

- HIPAA is the Health Insurance Portability and Accountability Act of 1996
- HITECH (incl. in HIPAA)
- HON: founded to encourage the dissemination of quality health information for
  patients and professionals and the general public, and to facilitate access to the
  latest and most relevant medical data through the use of the Internet.
- URAC a nonprofit organization that aims to promote health care quality by accrediting health care organizations.

#### **Obligations to other Government Agencies**

TSM is funded by OCS under contract 52994

# E. Proposed R&D Program

# E.1 Analysis of the Problem

Existing health assessment tools provide the users with health risk scores based on their medical information. For example, Mayo Clinic's health assessment tool relies on questions relating to medical history, health status, productivity, health care visits, preventive services, physical activity, nutrition, stress, sleep, tobacco, alcohol, emotional health, safety, etc. All those tools provide information as raw material either as written reports or charts which may require the user to approach his/her doctor for further explanation.

#### **E.2** Proposed Approach

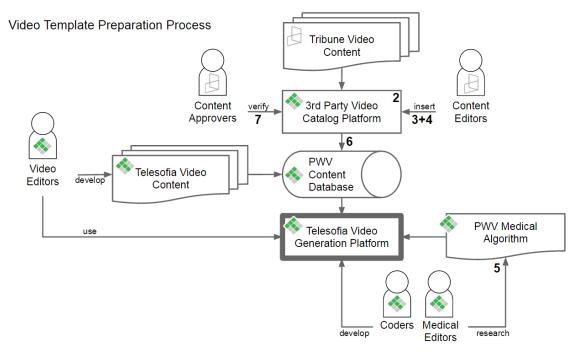
The technical ambitious objectives of PWV are in the following main areas:

- Tools for converting medical information being prepared as documents or database to algorithms enabling the creation of a personalized video.
- Splitting video information into short clips with proper tagging.
- Tools for creation of an Automatic Video Creation Tool being able to use the user's personalized data and/or Electronic Medical Record (EMR) of the medical institute servicing the user.
- Implementation of branded website to be used by Medical Institutes in providing their patients with Personalized Wellness Video.
- Management tools.

The product concept is presented in the following three diagrams (the numbers on the drawings refer to tasks described below):

- Video template preparation process
- Video Distribution Process Pro Version
- Video Distribution Process Basic Version

# **Video Template Preparation Process:**



TSM's personalized video system is capable of generating multiple videos based on a video template. The video template is built by medical editors, video editors, and developers. In this stage of the project, teams from TCA and TSM will work together in order to prepare the necessary video templates for the project.

#### This is how it works:

- Phase 1: Bring TCA video content to TSM's video generation platform
  - a. Content editors from TCA will access an online system that allows them to upload, catalog and tag TCA's video content.
  - b. The same platform can be accessed by physicians or other authorized personnel to approve or reject the content. This step is required for ensuring that the videos show what they were intended to show.
  - c. The approved videos and their meta data are stored in a database which can also be accessed by TSM's video generation platform.
- Phase 2: Build the video template
  - a. Medical editors work together with developers to convert a humanreadable medical protocol into a machine-readable medical algorithm. In this process, an automated script is generated to describe the different parts of the video template.
  - b. The medical algorithm is then inserted into the video generation platform.
  - c. Once the algorithm and script are ready, video editors can prepare the needed video clips that make the complete video.

#### **Video Distribution Process - Pro Version**

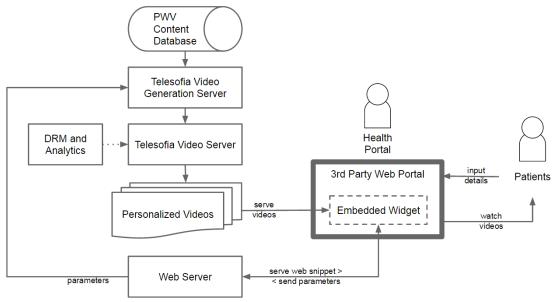
Video Distribution Process - Pro Implementation PWV/ Content Database Health Institutions Telesofia Video Generation Server **Branded Website FMR** Management Platform DRM and Telesofia Video Server patient details Analytics watch Branded Website **Patients** Personalized Videos 8 build application instance Website Generator

This diagram outlines the parts and steps involved in bringing the personalized videos to the end user (the patient), through an intermediary institution (e.g., a hospital).

- Process 1: A branded website is generated for the health institution
  - The website generator platform allows authorized personnel (e.g., technical people from the health institution) to create their own branded website.
  - b. The website has access to patient details from the institution's EMR system.
  - c. The patients can access the branded website, and view personalized videos tailored specifically for them.
- Process 2: Management system for the health institution
  - a. In addition to generating the branded, patient-facing website, the website generator will also generate a back office management system (dashboard) for the health institution. This dashboard will provide access to system configuration (e.g., change appearance and behavior of the website) as well as analytics reports.
- Process 3: Serving the actual personalized videos
  - a. The video database and medical algorithms created in the preparation process are used as the basis of this process.
  - b. The video generation platform receives a parameterized request from the branded website. The request is sent over HTTP using a REST API.
  - c. The video generation platform then decides which video needs to be sent back to the patient.
  - d. The personalized videos are served using TSM's dynamic video server.

#### **Video Distribution Process - Basic Version:**

Video Distribution Process - Basic Implementation



This process is similar in many ways to the Pro implementation described above. It is, however, simpler to implement from the client's side (client in this context means the entity that stands between TSM and the patient).

The target audience for this implementation is health-related websites, apps and other such portals.

This is what makes this implementation different than the Pro implementation:

- Instead of using a full-fledged website generator that generates a new, branded website, we will allow the already existing (3rd party) website to be the basis for the content serving.
- The 3rd party website will embed an HTML widget inside one or more of its pages.
- The widget will look as if it is a part of the website to the viewer, in the same way that YouTube videos may be embedded in other websites.
- The patient will access the 3rd party website, input their own details (age, gender and more), and watch their personalized videos.
- The widget will be served from TSM's web server, which will transfer the parameterized request to the video generation platform.
- The video generation platform will decide which videos to send, and show them to the patient.

The R&D activities in the project are defined, and for each there will be a Task Leader assigned by one of the partners (TSM-Telesofia, TCA-Tribune the Lead Partner is the first in the brackets). The list below indicates the start and finish month for each task, as well as the assumed dates based on a September 1st 2015 start date. These tasks are also displayed on the Gantt chart in section F. A detailed description of the tasks follows the list of Milestones for the project.

#### **PWV Tasks List**

Task No	Task	M Start	M Finish	Start Date*	<u>Finish</u> <u>Date*</u>
1	System design (TSM & TCA)	1	3	01/09/15	30/11/15
2	UI/UX for 3rd party video cataloger (TSM)	3	5	01/11/15	31/01/16
3	Research and design of video cataloger (TCA & TSM)	2	4	01/10/15	31/12/15
4	Implementation of video cataloger (TSM)	4	8	01/12/15	30/04/16
5	Research & Implement medical algorithm (TSM & TCA)	4	8	01/12/15	30/04/16
6	Research & Implement methods to embed legacy video clips (TSM)	5	12	01/01/16	31/08/16
7	Design & implement a system for testing and approval of medical videos (TSM)	5	9	01/01/16	31/05/16
8	Develop website generator (TSM & TCA)	6	14	01/02/16	31/10/16
9	Develop the branded website management system (TSM)	10	15	01/06/16	30/11/16
10	Develop an analytics and DRM system (for royalties payments) (TSM)	6	10	01/02/16	30/06/16
11	Develop PWV cloud infrastructure (TSM)	2	18	01/10/15	28/02/17
12	Develop business models and commercialization plan for PWV (TSM & TCA)	1	4	01/09/15	31/12/15
13	Participation in Medical Information Standards Activities (TCA)	1	18	01/09/15	28/02/17
14	System integration (TSM & TCA)	12	16	01/08/16	31/12/16
15	Testing of complete system (TCA & TSM)	16	18	01/12/16	28/02/17

#### **List of Milestones**

Milestone List	Ms	Month Ended on*	
MS1	3	30/11/15	End of System Design and 1 <sup>st</sup> Design Review
MS2	8	31/01/16	Complete implementation of video cataloger and 2 <sup>nd</sup> Design Review
MS3	12	31/08/16	Complete of implement methods to embed legacy video clips and 3 <sup>rd</sup> Design Review.
MS4	16	31/12/16	End of System Integration
MS5	18	28/02/17	End of Testing, End of Project

<sup>\*</sup> Based on a start date of the project on 1st Sep 2015

#### **Tasks Description**

# Task 1: System design (TSM &TCA)

In this task we will research, design, and plan the entire system from a high-level viewpoint. This task includes the planning of the Video Catalog platform, the Website Generator (and its associated management system), and other primary parts of the system.

#### Task 2: UI/UX for 3rd party video cataloger (TSM)

On this task we will design the user interface that will be used by the content editors to upload, index and tag the video clips. This task presents several challenges due to its cross-disciplinary nature and large amounts of video data files. The design will need to provide high usability and productivity for both content editors and medical personnel. We will approach this by interviewing representative from each group of the target audience and implement best practices for usability and user interface design.

#### Task 3: Research and design of video cataloger (TCA & TSM)

On this task we will research and design the system that will be used for indexing, tagging, and storing the video clips. This task presents several challenges in terms of data security and data storage. The system will need to store video clips from various sources in a way to that they can easily be found and used by medical and video editors.

#### Task 4: Implementation of video cataloger (TSM)

On this task we will develop the system that will be used by the content editors to catalog and tag the video clips. We will take iterative (agile) implementation approach aiming to provide a usable, functional prototype as early in the process as possible, to receive inputs from the intended audience.

#### Task 5: Research & Implement medical algorithm (TSM & TCA)

On this task, medical editors from both parties will work together and research the proper medical protocols for each of the video templates. They will then work together with system developers to convert these human-understandable protocols into machine-understandable code, using TSM's systems. This will be an iterative process that starts with locating and understanding the existing protocols, and gradually converting them into parts (scenes), logic (conditional flow), and a list of input parameters.

Task 6: Research & Implement methods to embed legacy video clips (TSM) On this task we need to implement a solution that will allow the external video content to work together seamlessly with TSM's video platform. This may include database design, automatic video clip cropping, transcoding, and more. The first step of this task will be to evaluate the video content, and understand the range of tasks that we will need to develop in order to achieve its purpose. After the spectrum of possibilities is mapped, we will develop the system to support it using server side programming. The activities on this task include preparation of video clips (by video editors) to be used in linking the legacy video clips.

# Task 7: Design & implement a system for testing and approval of medical videos (TSM)

This task serves as the "other side" of the video catalog platform. After the video content was uploaded, indexed and tagged by the video editors, the video and its associated

meta data will need to be tested by medical personnel. For the purpose of this testing, we will need an online system that will allow content auditors to log in, review the media and data, and approve or reject the content. The task involves developing a server side mechanism to access the video database and its meta data, as well as a secure website to accept input from the content auditors.

#### Task 8: Develop website generator (TSM &TCA)

On this task we will develop an online system that allows medical institutions (e.g., hospitals) to create their own branded version of a website that serves personalized videos to their patients. This will be a second-tier website, or a "website for making websites" in a manner similar to what wix.com or Wordpress.com are providing today to website builders or bloggers. This task presents many challenges in the data security, scalability, and DNS management areas.

#### Task 9: Develop the branded website management system (TSM)

On this task we will expand the website generator system to provide a dashboard for the medical institution. The dashboard will serve as a central place to manage their website installation and view analytics reports. The main challenge of this task will be to properly collect, aggregate, and store the data from the different parts of the system so that they can be properly presented in the administration dashboard.

#### Task 10: Develop an analytics and DRM system (for royalty's payments) (TSM)

On this task we will develop a mechanism that is capable of accurately tracking and measuring the use of the third party video content. The main purpose of this mechanism is to ensure proper royalty payments are made. One of the considered approaches to solving this problem is to use a server proxy on top of TSM's video server. This proxy will have access to meta data related to the videos, and will track requests to the video server. An alternative approach will be to modify or extend the inner workings of the video server to support this task's goals.

#### Task 11: Develop PWV cloud infrastructure (TSM)

On this task we will build the server infrastructure needed for the entire system. The process includes both manual deployment and provisioning of servers, as well as automation scripts that are designed to prepare all the required servers. We will approach this by planning the desired scalable architecture, and then we will automate it using industry standard infrastructure automation tools.

#### Task 12: Business Models and Commercialisation Plan for PWV (TSM & TCA)

On this task, business development and marketing team members from both parties will design the business model for the entire system.

Business and Commercial tasks:

- market research current market in these areas, competition, product acceptance
- focus groups
- refining clients' needs
- partnering with others
- market positioning
- entry strategy prioritizing target markets, testing financial models
- creating product support infrastructure

#### Task 13: Participation in Medical Information Standards Activities (TCA)

TCA will take the lead in ensuring that content we offer and products we develop adhere to accepted international standards of Medical Information. TCA has invested heavily in

developing relationships with highly credible content sources, which will be central to this effort. These sources and partners include:

- Harvard Health
- Mayo Clinic
- Reuters Health Network

These relationships have been established and maintained through consistent face-to-face meetings both in Chicago and in the respective home offices of the various partners, as well as through bi-weekly telephone conversations and regular email updates. It will be TCA's responsibility to account for and pay royalties to these various partners throughout the length of any contract that incorporates their content and brands. All three sources practice rigorous adherence to accepted standards for Medical Information and employ comprehensive internal policies to ensure that adherence. Through these partnerships, TCA will be able to ensure that all content used as source material in the Personal Wellness Videos is in compliance with these standards. Additionally, TCA will be responsible to gain approval from the various content sources used in production of these videos and assurance that the videos and products produced by TSM/TCA in their final form are also in compliance with Medical Information Standards and adhere to the internal policies and standards of our highly reputable content partners.

#### Task 14: System integration (TSM & TCA)

On this task we will integrate the various parts of the system in order to create a complete functional platform. The task may include development of various APIs to bridge communication between different parts (internal or external) of the system (e.g., API for a hospital's Electronic Medical Record [EMR] system). This task is assumed to be an "all hands" task and will probably require people from both teams to participate in one stage or another.

# Task 15: Testing of the complete system (TCA & TSM)

On this task TCA will launch a beta site and define a User Acceptance Test group (UAT). The Beta objective is to prove the product meets the need of the intended markets and audience. TCA will select a sample user base to represent each type of end user or market. These users can be named within TCA and TSM, or we can select clients we hold good relationships with and can rely on for strong feedback as to which aspects work and what bugs we need to fix. We would want to ensure that the system is tested and meets business requirements by creating a UAT test plan and test cases, and capturing defects/bugs reported by the test group in a UAT defect log. The test plan, cases, and defect log are created and managed by a business analyst. TCA would prioritize the fixes based on business needs, and once we determine the product is stable, we then go to market. TCA may continue testing future releases of the product with the User Acceptance Testing group and follow the same procedure for future releases.

# F. Program Plan

<u> </u>									_					_						_	_	_
	<u>Start</u>	<u>Finish</u>	TSM PM	TCA PM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Milestones							1					2				3			4			5
System design (TSM&TCA)	1	3	6.0	3.0																		
UVUX for 3rd party video cataloger (TSM)	3	5	6.0	0.0																		
Research and design of video cataloger (TCA & TSM)	2	4	5.5	2.5																		
Implementation of video cataloger (TSM)	4	8	9.5	0.0																		
Research & Implement medical algorithm (TSM&TCA)	4	8	6.0	5.5																		
Research & Implement methods to embed legacy video clips (TSM)	5	12	22.0	0.0																		
Design & implement a system for testing and approval of medical videos (TSM)	5	9	10.5	0.0																		
Develop website generator (TSM&TCA)	6	14	18.0	5.0																		
Develop the branded website management system (TSM)	10	15	8.5	0.0																		
Develop an analytics and DRM system (for royalties payments) (TSM)	6	10	5.0	0.0																		
Develop PWV cloud infrastructure (TSM)	2	18	9.5	0.0																		
Develop business models and commercialisation plan for PWV (TSM&TCA)	1	4	6.0	6.0																		
Participation in Medical Information Standards Activities (TCA)	1	18	0.0	9.0																		
System integration (TSM & TCA)	12	16	10.0	5.0																		
Testing of complete system (TCA & TSM)	16	18	4.0	3.0																		
Total PM			126.5	39.0																		

**Program Plan (GANTT) with Milestones** 

#### G. The Market

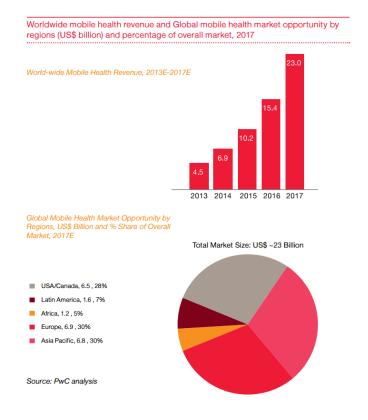
At the end of the PWV value proposition chain is the end user who is looking for trusted and personalized health and medical information. The user(s) will receive the health/medical information by a health application, widget (which will be part of a website), or from a website or health portal by medical institutions. The other participants/contributors to the value chain are the medical content providers, the website owners, the medical institutes and the advertisers, which can be defined as the following:

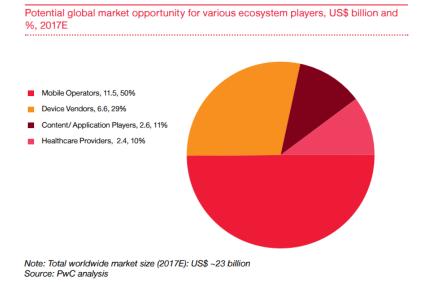
- Medical content providers such as Mayo Clinic, Harvard Health, Reuters Health, which are trusted partners of TCA. For the medical content providers, the PWV is a new channel to the end users. The medical content providers are due to collect royalties based on the amount of content that is viewed by the user as well as any additional algorithms used to determine what content shall be delivered to the end user, such as Mayo Clinic's Health Assessment or Harvard Health's Symptom Checker.
- Website owners whose primary business is the dissemination of current information may install the PWV widget on their website and may incorporate sponsored/branded video players and/or additional advertising including pre-rolls. The websites will share the revenue received based on the CPM of the number of PWV videos watched.
- Medical institutes such as hospitals already operating websites to service their clients may install the PWV widget and offer the service to them. The PWV widget may also be linked to individuals' personalized data on the medical institutes' EMR. The Medical Institutes will be charged an annual license fee with potential incremental increases based on the number of users.
- Advertisers: for the advertisers, PWV is a new media for advertisement. As the
  video prepared for the user is personalized, the advertisements may be defined
  and targeted to the individual user. It is expected that there would be a premium
  cost for such advertisements, which will be shared within the value chain.

PWV intends to approach websites, health insurance companies, wearable health devices, medical institutes, mobile telecoms providers and pharmaceutical companies as parts of its commercialization plan.

The PWV markets analysis refers to the Total Available Market (TAM) for the Basic and Pro Versions:

- Basic Version Based on: "Touching lives through mobile health-Assessment of the global market opportunity" (published by PWC Feb 2012)
- Pro Version Based on: "Fast Facts on US Hospitals" (published by American Hospital Association Hospitals Jan 2015)





For the Base Version we may look on PWC as a good forecasting reference. Based on the total market value forecast of 23 Billion for 2017 and a USA/Canada being 28% of global market we have estimated a much slower growth for 2018-2023 (see PWV Forecast Table on Sec H2). Out of the US/Canada market of Mobile Health Revenue the report estimates 11% to be consumed for Content/Application Player (we have estimated 8% for content). The Forecast table on H2 includes also our estimation of market penetration.

For the Pro-Version the TAM is based on the number of registered hospital as presented by American Hospital Association (AHA) as follows:

- Total number of AHA registered hospitals = 5,686
- Total number of staffed beds of AHA registered hospitals = 914,513
- Total number of admissions of AHA registered hospitals = 35,416,020

Our estimation includes a very slow increase in the number of hospitals and an estimated market penetration on annual new installation. The active number of hospitals (row B3) is based also on an estimate annual churn of 10%. The estimated annual revenue is based on the active number of hospital and a planned average annual licensing fee of US\$200K as can be seen in the PWV Forecast table (Sec H2).

Hospitals are just on potential target market for the Pro Version. Other target markets include health insurance companies, HR departments of large organizations for wellness plans, and other large players in the wellness industry.

TCA specializes in the dissemination of news; premium magazines; and photographic, info-graphic, video, and health content for thousands of clients worldwide. Since 2012, when content marketing became the buzz word, marketers have been spending more of their budgets on content marketing (approximately a quarter). In fact, there has been a 70% increase in the number of B2B marketers producing content since last year alone (Institute for Content Marketing, 2015). However, while such an increase could be seen as a positive for the industry as a whole, many marketers are producing disenchanting and disengaging content for their audience. This in turn damages their credibility. Only 38% of the 5,000 B2B marketers surveyed in 109 countries rated their organization's content marketing as effective. This therefore leads to companies wasting valuable time and resources producing irrelevant content, which particularly in the health care sector requires regular updates and revisions in order to keep up with regulatory, clinical, and scientific trends and developments. It is therefore often more economically viable to license health content from a reputable organization like Harvard Health or Mayo Clinic than it is for a company to produce it itself.

TCA has been syndicating premium health content for over 15 years to newspapers, magazines, websites, and more recently to mobile telecom providers, governments, health insurance companies, hospitals, and more. The discussion that TCA have had with our vast network of clients, including the idea of producing an interactive health assessment with TSM has been positively received.

There are various companies that produce health assessment tools, such as QScore, which is currently being launched. However, there is a significant lack of information being provided to the user. For example, after taking the health assessment for dementia from QScore, (which is development by the university of Nottingham, something of which we believe will have less appeal internationally compared to the likes of Mayo Clinic's proprietary health assessment), a score of 69.06 was determined. The following text is delivered: "Your Dementia Q Score is 69.06, this is a low risk score and places

you in the healthy Q Score range for dementia. Well done and keep up the good work! You can enhance your health and well being even further by making some positive lifestyle changes to move you towards the optimum dementia Q Score. There is always room for improvement." While it is beneficial to know that the user is at low risk for dementia, there is no additional information provided to suggest or track improvements.

This is a common occurrence in all other health-related assessments which are on the market, including for example PruHealth, which again provides no follow-up information. From previous discussions with PruHealth's marketing director, they did acknowledge that their service lacks content, and therewas a keen interest on their behalf to license health content from TCA.

# H. Commercialization - Plans and Prospects

# H.1. Product Manufacturing, Marketing and Sales Activities

TCA brings over 30 years of experience in commercializing editorial products across different categories and platforms through print and digital distribution channels worldwide. Ongoing efforts to license high-end health libraries and products, as well as products derived from existing premium content brands outside of the health industry, have given it a predefined target list of potential customers to approach with Personalized Wellness Videos. The following list represents a sampling of the target market of websites that will be approach. Other potential customers include pharmaceutical companies, health care providers, Insurance providers, hospital groups, corporate human resource departments, general interest websites, niche websites in the health vertical, mobile app developers, telecom operators, device developers, and government institutions.

#### Examples include:

Potential or Current Client	Website	Country
NHS	www.nhs.uk	UK
Web MD	www.www.webmd.com/	USA
Drugs.com	www.drugs.com	New Zealand
Everyday Health	www.everydayhealth.com	USA
Health Line	www.healthline.com	USA
Health.com	www.health.com	USA
Medscape	http://www.medscape.com	USA
Prevention.com	www.prevention.com	USA
Eating Well	www.eatingwell.com	USA
Patient.co.uk	http://www.patient.co.uk	UK
Womans Day	www.womansday.com	USA
Axismed	http://www.axismed.com.br/	Brazil
Terra	www.terra.com	USA & L. America
Medisource	www.mediresource.com	Canada
Wymbe	www.wymbe.com	Brazil
Diariosalud	http://www.diariosalud.net/	Uruguay
El Correo	http://www.elcorreo.com/bizkaia/sociedad/salud/	Spain
Mujehoy	http://www.mujerhoy.com/salud/	Spain
Womens Health	http://womenshealthsa.co.za/health/	South Africa

Yahoo Lifestyle	https://au.lifestyle.yahoo.com/womens- health/#page1	Australia
Saop Lifetsyle	http://lifestyle.sapo.pt/saude	Portugal
ok-salute	http://www.ok-salute.it/	Italy

TCA and TSM will market the PWV product to target customers and industries through:

- Personal visits conducted by team of 10 dedicated sales executives based in the U.S. and London with responsibilities for defined geographic territories worldwide.
- Attendance at relevant conferences and conventions within the health and mobile industries. Exhibiting at these conferences will be evaluated on a case-by-case basis.
- Marketing through the various communication channels offered by relevant industry associations (newsletters, email lists, social media pages, etc.).
- Digital marketing through the TCA website and associated social media networks.
- Telephone and email campaigns by territory under the direction of the respective territory managers with predetermined benchmarks and goals along the sales pipeline.
- Use of sub-agents and regional partners where beneficial.

The Pro and Basic Versions can be made available through one or more of the following business models and platforms:

- A la carte purchase of individual videos through our e-commerce website.
- Pricing to be determined on market by market basis based on TCA's experience and expertise of the various market segments in the respective territories.
- Videos to be used on existing websites and in existing apps of the purchaser.
- Annual contract purchase.
- Monthly retainer paid for rights to a predetermined number of personalized videos.
- Prices determined by market size and relative reach of each customer.
- White label apps or MMS services.
- Minimum annual licensing fee against a percentage of gross revenues derived from the app or MMS service (subscriptions and/or sponsorships).
- Widgets.
- Minimum annual licensing fee against a percentage of gross revenues derived from sponsorships and advertisements sold in conjunction with the widget.
- White label websites or portals.
- Minimum annual licensing fee against a percentage of gross revenues generated by the site (advertising, subscriptions, sponsorships, etc.).
- Pan Network advertising and sponsorships sold across the network of participating website, widget and mobile product customers.
- Predetermined percentage of network advertising revenues returned to participating customers.

In summary, TCA and TSM will leverage existing content marketing relationships and territory expertise to develop pricing and business models on a per-territory basis to maximize the opportunity in each target market. Existing and proven sales and marketing structure including dedicated sales executives and experienced marketing

teams will work hand in hand with operations and product development teams to ensure profitability within the established time lines and to attain the revenue forecasts.

# H.2. Forecast & Cash Flow Analysis

The product is planned to be distributed mainly via TCA distribution channels. The Forecast for 2017-23 was prepared by TCA based on TCA's distribution capacity and the forecasting assumptions (see Sec G). The Cash Flow for each company is based on agreed 50/50 share of revenue between the companies (see Sec I)

#### PWV Forecast 2017-23

		2017	2018	2019	2020	2021	2022	2023
A1	WW forecast for mhealth (B\$)	23	35	41	50	60	72	86
A2	US/Canada forecast for mhealth (B\$)	6	10	12	14	17	20	24
А3	US/Canada TAM for PWV Basic Version (B\$)	0.515	0.773	0.927	1.113	1.335	1.602	1.923
Α4	Estimated Market Penetration	0.15%	0.40%	0.80%	1.00%	2.00%	3.00%	4.50%
A5	Revenue for Basic Version (M\$)	0.773	3.091	7.419	11.128	26.708	48.074	86.534
B1	US TAM for PWV Pro Version (number of AHA	6,500	6,565	6,631	6,697	6,764	6,832	6,900
B2	Estimated Market Penetration	0.10%	0.30%	0.60%	1.20%	2.40%	3.60%	5.40%
В3	Estimated Active US Hospital w Pro-Version	6	24	60	134	282	498	820
B4	Estimated Revenue on Pro-Version (M\$)	1.200	4.800	12.000	26.800	56.400	99.600	164.000
		·						
C1	Total Estimated Revenue (M\$)	1.973	7.891	19.419	37.928	83.108	147.674	250.534

# **TSM Cash Flow**

No.	Cash-Flow component	Derivation				N = No. of Years				
Υ	Calendar year	Ist Calendar Year	2016	2017	2018	2019	2020	2021	2022	2023
	Project year	122	1	2	3	4	5	6	7	8
	Revanue from Pro Version (K\$)	estimate		600	2,400	6,000	13,400	28,200	49,800	82,000
	Revanue from Basic Version (K\$)	estimate		386	1,546	3,709	5,564	13,354	24,037	43,267
s	Total revenue from PWV			986	3,946	9,709	18,964	41,554	73,837	125,267
м%	Content Cost (% of sales)	0%		0%	0%	0%	0%	0%	0%	0%
м	Content Cost (K\$)	=M% x S		0	0	0	0	0	0	0
0%	Operating Expenses (% of sales)	35%		35%	35%	35%	35%	35%	35%	35%
0	Operating Expenses (K\$)	=0% x S		345	1,381	3,398	6,637	14,544	25,843	43,843
D	Development Expenses (K\$)	estimate	700	300	500	971	1,896	4,155	7,384	12,527
С	Capital Expenses (K\$)	estimate	50	30	30	30	30	50	100	150
Ε	Depreciation (K\$)	linear over 5 yrs.	10	16	22	28	34	34	48	72
_	Before Tax Income/Loss (K\$)	=S-M-O-D-E	-710	325	2,043	5,312	10,396	22,821	40,562	68,825
Т1	Cumulative Losses carried over (K\$)		-710	-385	0	0	0	0	0	0
T2	Taxable Income (K\$)		0	0	1,658	5,312	10,396	22,821	40,562	68,825
Т%	Income Tax Rate (%)	10%	0%	0%	0%	10%	20%	20%	25%	25%
т	Income Tax (K\$)	=T% x T2	0	0	0	531	2,079	4,564	10,141	17,206
OF	Operating Cash Flow (K\$/Yr.)	=I+E-T	-700	341	2,065	4,809	8,351	18,291	30.470	51,691
w%	Working Capital (% of sales change)	25%		25%	25%	25%	25%	25%	25%	25%
w	Working Capital Change (K\$)	=W% x (Sn-Sn-1)		247	740	1,441	2,314	5,647	8,071	12,857
٧	Residual Value of Assets		0	0	0	0	0	0	0	31,523
AF	Total Annual Cash Flow (K\$)	=OF-C-W+V	-750	65	1,295	3,338	6,007	12,593	22,299	70,206
CF	Total Cumulative Cash Flow (K\$)		-750	-685	609	3,947	9,955	22,548	44.847	115,053
R	Annual Discount Rate (%)	15%								
DAF	Annual Discounted Cash Flow (K\$)		-652	49	851	1,909	2,987	5.444	8,383	22,950
DCF	Cumulative Discounted Cash Flow (K\$)		-652	-603	248	2,157	5,143	10,588	18,971	41,921
IRR	Inernal Rate of Return (%)	165%								

# TCA's Cash Flow

No.	Cash-Flow component									
Υ	Calendar year	Ist Calendar Year	2016	2017	2018	2019	2020	2021	2022	2023
	Project year		1	2	3	4	5	6	7	8
	Revanue from Pro Version (K\$)	estimate		325	1,313	2,652	10,715	21,645	32,792	49,679
	Revanue from Basic Version (K\$)	estimate		129	773	1,855	8,903	21,366	38,459	69,227
s	Total revanue from PWV			454	2,086	4,507	19,618	43,011	71,251	118,906
м%	Content Cost (% of sales)	20%		20%	20%	20%	20%	20%	20%	20%
м	Content Cost (K\$)	=M% x S		91	417	901	3,924	8,602	14,250	23,781
0%	Operating Expenses (% of sales)	35%		35%	35%	35%	35%	35%	35%	35%
0	Operating Expenses (K\$)	=0% x S		159	730	1,577	6,866	15,054	24,938	41,617
D	Development Expenses (K\$)	estimate	300	100	100					
С	Capital Expenses (K\$)	estimate	30	20	20	20				
Ε	Depreciation (K\$)	linear over 5 yrs.	6	10	14	18	18	12	8	4
-	Before Tax Income/Loss (K\$)	=S-M-O-D-E	-806	94	825	2,010	8,810	19,343	32,055	53,504
T1	Cumulative Losses carried over (K\$)		-306	-212	0	0	0	0	0	0
T2	Taxable Income (K\$)		0	0	613	2,010	8,810	19,343	32,055	53,504
Т%	Income Tax Rate (%)	25%	25%	25%	25%	25%	25%	25%	25%	25%
т	Income Tax (K\$)	=T% x T2	0	0	153	508	2,208	4,836	8,014	13,376
OF	Operating Cash Flow (K\$/Yr.)	=I+E-T	-300	104	685	1,526	6,626	14,519	24.049	40,132
w%	Working Capital (% of sales change)	25%		25%	25%	25%	25%	25%	25%	25%
w	Working Capital Change (K\$)	=W% x (Sn·Sn·1)		113	408	605	3,778	5,848	7,060	11,914
٧	Residual Value of Assets		0	0	0	0	0	0	0	29.727
AF	Total Annual Cash Flow (K\$)	=OF-C-W+V	-330	-29	257	900	2,848	8,671	16,989	57,945
CF	Total Cumulative Cash Flow (K\$)		-330	-359	-102	798	3,646	12,317	29,306	87,251
R	Annual Discount Rate (%)	15%								
DAF	Annual Discounted Cash Flow (K\$)		-287	-22	169	515	1,416	3,749	6,387	18,942
DCF	Cumulative Discounted Cash Flow (K\$)		-287	-309	-140	375	1,791	5,539	11,926	30,869
IRR	Internal Rate of Return (%)	162%								

# 1. Cooperation, Economic, and Social Benefits

TCA and TSM will be working hand in hand to develop and commercialize a compelling Personalized Wellness Video product that will return revenue for our respective organizations as well as enhance the quality of life and overall well-being of the end product users throughout the world. For many of these end users, this will be the first time they have ever had access to critical and in many cases life-saving information in a personalized and easily understood format.

Along the value chain we will be increasing productivity of our customers' subscribers and customers, and constituents through enhanced health and quality of life. Additionally, the health-related cost savings generated by responsible use of our product by end users in our target market populations, will result in greater profitability and opportunity for our customers, and corresponding personal, corporate, and national economic growth.

Both organizations will be sharing in the risk and commitment to develop the Personalized Wellness Video and bring it to defined markets throughout the world. We will do this through:

- Consistent communication.
  - Bi-weekly calls between the respective operations and development teams during product development.
  - Daily technical calls and updates during testing and implementation.
  - Monthly telephone sales and marketing summits in which progress is monitored and pricing and business models are evaluated.
  - Bi-annual, in-person meetings in either Israel or the U.S. to determine next steps and project growth and adjustments.
- Leveraging of existing resources.
  - Systems designed by TCA to deliver and market existing content sources and products.
  - Technical and design capabilities of TSM as well as knowledge of medical and health related markets.
  - Algorithms designed by TSM for current product offerings.
  - Algorithms and content libraries of TCA health information partners (e.g. Mayo Clinic and Harvard Health).
  - Existing client bases of both organizations.
  - Existing operations, billing, and sales structures.
- Shared investment in research and development and product enhancement.
  - Allocation of system and product developers from both organizations.
  - Contracts with third party developers and partners where warranted to develop additional platforms and language capabilities in specific regions and markets.
  - Capital investment where needed in hardware, software, and industry knowledge or programs.
  - Continual acquisition of content and video rights from recognizable and credible health information brands and sources.
- Aggressive allocation of sales and marketing resources to commercialize the product.
  - Allocation of time from each of the territory sales executives with predetermined goals and benchmarks.
  - Designated travel budgets against launching and sustaining the product.

- Marketing resources diverted and developed to increase exposure of the product offering.
- Development of new marketing websites and campaigns.
- Attendance at worldwide industry conferences and exhibitions.

Revenues generated from commercialization of the product will be split 50/50 between the two organizations with Tribune Content Agency responsible for royalty payments made to contributing content partners in accordance with their existing representation agreements and practices.

A portion of the profits to be re-invested in product enhancement, expansion, and growth as determined through mutual consent.

In summary, TCA and TSM will be working together to invest in a product development and launch that will create new revenue streams for both organizations while also creating revenue streams, cost savings and enhanced productivity for our partners, as well as enhancing the quality of life of end users around the world.

# J. Organization and Management Plan

The project management includes two Site Managers -- for TCA **Wayne Lown** and for TSM **Rami Cohen** -- who together with the PCO, **Oliver Cahalan** from TCA, will manage the day-to-day activities of the project as well as the formal relationship between the partners. The general purpose of the project management is to strategically control the project, implying coordination of the different project activities and implementation of quality-control mechanisms with appropriate project standards. Part of the project management tasks are to take into account issues of mobility of project resources and the need to share responsibilities among all of the project's partners.

Project management will cover financial, administrative, scientific, and knowledge and innovation aspects. Above the technical management of individual tasks, an appropriate management framework linking together all project components and maintaining communication with the BIRD will be set up. For daily work, a specially constituted management team with dedicated staff covering a range of skills (e.g., project management, IP, exploitation) will be set up in the form of a Project Management Office.

Project management activities will include:

- coordination of the technical activities of the project at project level,
- overall legal, contractual, ethical, financial and administrative management of the project,
- preparing, updating and managing the project agreement between the participants,
- set-up and maintenance of a Virtual Project Management Tool for structured document repository and project communication, linked to the project website, with restricted access for project partners,
- coordination of knowledge management and other innovation-related activities at project level.

The decision body of the project will be the **Project Coordination Committee (PCC).** The **PCC** consists of the Project Coordinator (PCO) and the TCA and TSM Site Managers.

The project plans on meeting on a Design Review forum on the major milestones as defined on the timeline. The meetings on those milestones will be either on TCA's or

TSM's site and are not planned to require any specific accommodation. The milestones are defined in section E.

#### **Decision-Making Structures**

The PWV project will be organized into three decision-making bodies. The PCC will be the main legislative body of the project and will have ultimate decision-making power in all fundamental questions of project execution, such as:

- decisions on the change of technical specifications in this document,
- agreeing on procedures and policies for the management of the knowledge,
- deciding upon the technical road maps with regard to the project,
- deciding upon press releases, patent applications and joint publications by the parties with regard to the project,
- deciding upon measures in the framework of controls and audit procedures to ensure the effective day-to-day coordination and monitoring of the progress of the technical work affecting the project as a whole,
- deciding on the management of the project.

The **Agreement** between the two parties will cover all the BIRD requirements and mainly the following issues:

- The target objectives, scope and desired results of the joint R&D to be undertaken in the project;
- The magnitude of the project budget and the sources of funds to finance this budget;
- The ownership of the intellectual property to be generated by the project;
- The assignment of responsibilities between the two companies for the various functions required in the commercialization of the developed product, such as production, marketing and sales, sales support, etc.;
- The specifications and transfer prices of products, components, or services that will be sold by one company to the other;
- The basis upon which revenues and profits from commercialization of the developed products will be shared between the companies;
- The distribution of repayment to BIRD between the two companies.
- Technical provisions (technical resources made available, modification procedures).

#### **Conflict Resolution**

A conflict arises if the interests, opinions, and the points of view of the partners vary to such an extent that the contradictions cannot be solved by themselves. In this case, it is important to solve the conflict rapidly, as the fast resolution of conflicts and problems is crucial for efficient project progress. Therefore, the procedure for conflict resolution to be used when a conflict arises is described below.

Extraordinary Task Meeting: All persons involved in the task have to take part in the extraordinary task meeting.

Extraordinary PCC Meeting: Persons from each partner being responsible for the project progress participate in that meeting. Generally, conflicts should be solved in this project management meeting at the latest.

# **Other Operations Issues**

Meetings

The PCC will meet once a year. In order to limit travel and as a general rule, the Partners agree to meet 2 to 3 days every 6 months. During these days, all meetings of the various bodies needed at that time will take place. The grouping of the meetings guarantees maximum efficiency: immediate input and feedback from one meeting to another one, possibility to call ad-hoc meetings, easy informal contact between all parties concerned, and minimum travel cost. At the project start, the PCC will issue the calendar (time and place) of the various meetings for one year, and from then, one year in advance.

16/04/2015

#### Planning

Drafting coherent plans for the Project work is an essential prerequisite to enable the work to progress. The current description of task presents a high-level overview of the Project, setting out the ground rules on which the Project will proceed in terms of objectives, technical approach, and time scales. An important follow-on to this basis is the production of revised technical activity plans within each of the Tasks. These plans will be produced by the people who will be carrying out the workThey must be aligned by the Task Leader and approved by the PCC. The work plans are the basis on which both Tasks and Partner progresses are judged and reported. They can be revised only with the approval of the PCC.

#### **Documents**

Documents produced by the project will be properly managed:

- usual electronic formats will be explicitly agreed upon.
- a structured identification and version reference will be given to each of them indicating:
  - o type (e.g., deliverable, internal document, published document, etc.),
  - o status (e.g., planned, draft, distributed, approved, living, final, obsolete, etc.),
  - o confidentiality level (e.g., public, Project only, strictly confidential, etc.),

Documents will follow a life-cycle, depending on their types, defined by the PCC. All documents will circulate through the Google Drive.

#### **Quality Management**

Quality shall not only be addressed for the Deliverables but also for the Project processes themselves.

They shall be submitted to periodical review regarding:

- Adequacy of the project management plan and how the work performed complies with it, including IP management and results dissemination.
- How well the project processes are synchronized and inter-linked,
- Identification and evaluation of activities and results that would adversely affect the achievement of the project objectives.
- Process improvement in the project by identifying deviations and changes.

On top of the Project scope-related processes, the management will identify and handle interdependency processes:

- project initiation and project management plan development
- interaction management
- change management
- closure of completed processes

Management will monitor and control (i.e., taking corrective actions) expenses, resources, and schedules versus plans (i.e. technical and financial annexes to the BIRD Contract). Possible impacts of schedule changes on the budget and resources of the project and on the quality of the product should be determined.

Root causes for deviations, be it shortages or excesses, in costs, resources, and schedules shall be identified, recorded, and used as input for continual improvement. In order to enable self-assessment regarding the extent to which the objectives will be met, criteria and metrics will be defined.

#### **Telesofia Key Personnel**

Rami Cohen, MD Founder & CEO - Rami founded Telesofia Medical, combining his passions for medicine and technology. He has 17 years of experience in the Internet industry. He started his career in 1997 at ICQ (formerly Mirabilis, acquired by AOL in

1998, for US\$407 million) in various roles, including Director of Web Operations. Since 2001, he has helped several companies and startups with product development, launching, and marketing in the online world. As VP Operations at Novawind, he provided hands-on marketing, business development and innovation management services for leading companies. Rami also holds a medical degree from Tel Aviv University, and worked at the Vascular Surgery Department in Tel-Aviv Sourasky (Ichilov) Medical Center and Assaf Harofeh Medical Center.

Danny Ben Shitrit VP R&D - Danny was the first webmaster at Mirabilis, responsible for the creation and development of ICQ.com. He later served as the VP of Product and Marketing, managing all aspects of the website, including design, marketing, and strategic direction. Danny left ICQ in 2005 to start his own company in the financial markets industry. With his combined expertise in programming, product development, marketing, management, and finance, he has spent the last few years prior to joining Telesofia as a much sought-after consultant in the information technology and services industry.

#### **TCA Corporation Key Personnel**

**Wayne Lown** (Vice President of Sales and Marketing at Tribune Content Agency): Wayne Lown joined Tribune in 2004 and oversees the global content licensing efforts for Tribune Content Agency as the VP of Sales and Marketing. Lown brings more than 20 years of media industry experience with prior management positions as Site Revenue Director at B2B Works and Digital Sales Manager at Chicago Sun-Times. Lown earned his MBA from Michigan State and bachelor's degree from Western Michigan University.

**Kristin Carriero** (Sr. Product Manager at Tribune Content Agency): Responsible for creation and implementation of the company's social media strategy as well as development of brand awareness, generating inbound traffic and cultivating leads and sales. Kristin is also taking care of community discussions via social media.

Oliver Cahalan (Director of Global Health Content at Tribune Content Agency): Responsible for developing and driving health content licensing opportunities globally from TCA partners content at Harvard Health, Mayo Clinic, and Reuters Health with public and private health care companies, health insurers, health portals, pharmaceutical, hospitals, clinics, care homes, digital health start-ups, governments, and more. Additional responsibilities include creating business models and sales strategies for each client type; liaising with Harvard Health, Mayo Clinic, and Reuters Health; drafting complex contractual agreements; managing external agents for health content licensing opportunities; creating pricing guidelines; defining key conferences to attend; and working on overall technological, marketing, and sales strategies. Education: BA (Honors) in Business Studies (The Open University)

Ryan Stephens (International Sales Director/Product Manager): Manages product line of over 50 different editorial products sold to worldwide publishers. Ryan is responsible for all aspects of international business including sales force management, operating plan development and execution, strategic planning, and product management. Manages relationships with partner creators such as the McClatchy/Tribune news wire, Rolling Stone Magazine, New York Magazine, USA Today, Henry Kissinger, Alvin Toffler, Global Viewpoint, etc., as well as purchasing publishers from Asia, Europe, Latin America, and the Middle East. Ryan helped to establish TCA as the premier source for authoritative content and commentary worldwide. Education: BA (Communications) Brigham

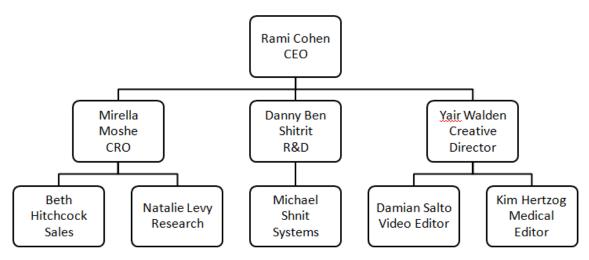
# K. The Companies and Their Resources

#### Telesofia

TSM's proprietary platform allows health care providers and other players to automatically generate branded personalized educational videos for patients. The videos are tailored to the specific patient, directed to low literacy level, and available on devices with no need to install specific codecs. The fully branded videos are sent to patients via text or email or embedded in patient portals/apps. The service results in increased patient understanding and improved adherence.

TSM's platform currently supports a wide variety of applications such as explaining proper use of medication, directing preparations for medical procedures, and providing discharge instructions. Videos can be personalized to each patient based on their demographics, lab results, specific medical instructions, specific product used, and more. The videos are easily integrated into existing workflows and platforms. The current products provide value to many players from the payer to the patient, through targeted, personalized patient communication. Current markets include: health care providers, pharma companies, pharmacists, and payers.

TSM has received strong and positive feedback from many in the health care industry, including magazines such as Forbes, Inc., and BizzVenue, the latter of which named it the "No. 1 Israeli Startup to Watch for 2015." In 2014, it won the first prize both in the MIXiii Biomed and the Digital Health IL conferences. It was recently nominated by Gartner as a "Cool Vendors for healthcare providers"



**TSM Organisation Chart** 

#### **Tribune Content Agency**

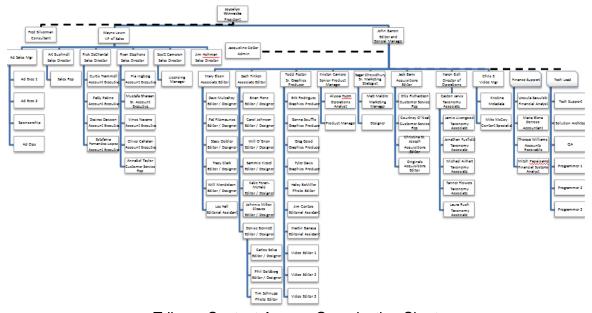
Tribune Content Agency, part of the Tribune Publishing family, is a premium content creator and distributor since 1918 with over 2000 clients in nearly 100 countries. It either owns or manages the licensing and syndication rights to hundreds of internationally acclaimed titles such as The Los Angeles Times, Chicago Tribune, New Scientist, Foreign Affairs, and The Atlantic, and to health and medical content from Harvard Health, Mayo Clinic and Reuters Health News Wire service.

The Tribune Publishing family is a diversified media and marketing solutions company with a portfolio of iconic news and information brands, including 10 award-winning daily titles, more than 60 digital properties, and more than 150 verticals in key markets.

Tribune Publishing also offers an array of customized marketing solutions, and operates a number of niche products. The group ended 2014 with 3.2 million digital registered users, and launched its next-generation digital experience and responsive mobile apps. Its yearly operating revenues are in the \$1.7B range.

Harvard Health and Mayo Clinic are two of the world's leading authorities in consumer health and patient education, and produce some of the most trusted health and well-being content written by their combined 15,000+ doctors. The content from these two premium sources has allowed TCA to expand its client portfolio to include private health insurance companies, hospitals, governments, mobile telecom providers, pharmaceutical companies, and more.

Additionally, TCA manages the rights to Mayo Clinic's Healthy Living Portal, which is optimized for mobile, tablet, and PC use. It utilizes Mayo Clinic's medical expertise and focuses on implementing sustainable behavior changes in order to reduce the risk of long-term illnesses and chronic conditions. Users complete a health assessment to identify strengths, risks, and concerns. The resulting data can be used to create a highly personalized wellness plan. Additionally medical history and pre-populated values of blood pressure, blood sugar, and cholesterol, triglycerides, weight, height and hemoglobin A1c levels are taken into consideration in order to place people into different risk stratification groups that are unique to Mayo Clinic.



Tribune Content Agency Organization Chart

# L. Project Budget

See attached Excel sheets.

# M. Risk Analysis

# **RISK ANALYSIS TABLES**

# **TABLE 1A**

				Impact	
Risk#	Name	Ranking	Duration	Budget	Commercialization
					Potential
1	Video	Very Low	Medium	Medium	Low
2	Website generator	Low	High	High	Low
3	Regulation	Very Low	Low	Medium	Low
4	Business Model	Medium	Low	Low	Low
5	Market	Low	Low	Medium	Medium

# **TABLE 1B**

Risk#	Description	Type*
1	Composition of legacy video (Codecs, Content, resolutions)	Т
2	Website generation need to meet HIPAA standards	Т
3	Change in regulation with regards to medical information	Е
4	Business model needs to be changed following launch of the	М
	product	
5	Product acceptance by the market will be slow.	М

Impact	Duration1
High	Above 6 months
Medium	3 to 6 months
Low	Below 3 months

Ranking	Probability of Risk		
	Occurring		
High	Above 50%		
Medium	30 – 49%		
Low	10 – 29%		
Very Low	1 – 10%		

Impact	Budget	
High	Above 20% increase	
Medium	10% to 20% increase	
Low	Below 10% increase	

Impact	Commercialization	
	Potential	
High	Above 50%	
Medium	30% to 50%	
Low	1% to 29%	

<sup>\*</sup>Type: Technical (T), Project Management/Resources (M), External to the Project (E)

# N. Sundry Information – Mandatory

Following approval of the grant application by BIRD's Board of Governors, the partners will provide the Foundation all information required to prepare the CPFA

Following is the information required at the proposal stage:

- 1. Venue for the applicable law governing the CPFA between the companies and the Foundation, i.e., one of the States of the Union or Israel, as agreed upon by the companies: TBD
- 2. Company's Certificate of Incorporation

	Telesofia	Tribuno	
		Tribune	
Company name	Telesofia Medical Ltd	Tribune Corporation	
Company locations (headquarters	151 Ibn Gabirol St.	435 N. Michigan Ave.,	
and relevant division address,	Tel Aviv, Israel	TT 1400	
including full street address, city,		Chicago, UK 60611,	
state)	244 5th Av., Suite R- 275	USA,	
	New York, NY 10001 USA		
Company Registration Number	514613710	36 - 1880355	
Year established	2011	1918	
Project Manager details:			
Name	Rami Cohen	Oliver Cahalan	
Position	CEO	Director, Global Health	
Direct telephone number	+972-77-2060488	+44 20 7588 7588	
e-mail address	rami@telesofia.com	ocahalan@tribpub.com	
Details of bank accounts:			
Name of account	Telesofia Medical Ltd.	Tribune Content Agency	
Account number	305435	1257453675	
Name of bank & branch number	Hapo'alim 689	Bank of America	
Bank address	19 Ben Yehuda St., Tel	New York, NY, USA	
	Aviv		
Swift & ABA	POALILIT	BOFAUS3N	
	IL83-0126-8900-0000-	0260-0959-3	
	0305-435		

BIRD Proposal PWV 16/04/2015

# **Tribune Content Agency LLC Certificate of Incorporation**

Form W-9  (New, August 2013) Department of the Treasury Internal Revenue Berice  Identification Number and Certification				Give Form to the requester. Do not send to the IRS.		
_		your income tax return)				
6						
Print or type ic instructions on page	Check appropriate box for federal tox classification:   Individual/sole proprietor		Partnership Trust/estate		s (see instructions):	
	✓ Limited liability company. Enter the tax classification (C~C corporation, 5~4		Exempt po		yee code (f any) n from FATCA reporting re)	
돈음	Other (see ins					
퓽	Address (number, street, and apt. or suite no.)		Requester's name of	and address	(optional)	
Š	City, state, and ZIP	35 N. MICHIGAN AVENUE, 3RD FLOOR				
8	CHICAGO, IL 6					
	List account number					
Pa		yer Identification Number (TIN)				
Enter your TIN in the appropriate box. The TIN provided must match the name given on the "Name" line to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see Mow to get a						
	n page 3.	more than one name, see the chart on page 4 for gu	idelines on whose	identificati	lon number	
numi	per to enter.	Titlore than one marie, see the chart on page 4 for go	3 6 - 1		8 0 3 5 5	
Pai	Certifi	cation				
Unde	r penalties of perju	ry, I certify that:				
		on this form is my correct taxpayer identification numb				
<ol><li>I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Pervenue Service (RRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and</li></ol>						
		other U.S. person (defined below), and				
4. The FATCA code(s) entered on this form (if any) indicating that I am exampt from FATCA reporting is correct. Certification instructions. You must cross out learn 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transaction, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, carcellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3. Sign Sign Separative of						
Her	0 U.S. person	Al Garalchi	Data ► 0/62	1 14		
	neral Instruc		withholding tax on foreign partners' share or 4. Gartify that FATCA code(s) entered on	this form (If		
Section references are to the Internal Reversor Code unless otherwise noted. Future developments. The PS has created a page on IPS gor for information about Form W-0, at www.irs.gov/e/9, Information about any future developments affecting Form W-0 (such as legislation enacted after we release it) will be posted on that page.		RS has created a page on IPS gov for information s.gov/w9, Information about any future developments	exempt from the PATCA reporting, is correct.  Note, if you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.			
Purpose of Form			Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:			
A person who is required to file an information naturn with the RS must obtain your consoit tappays identification number (File to report, in counte), some paid to you, payment made to you in estitlement of payment cond and filed party network transactions, mai estate transactions mortgage interest you poid, acquisition or abendament of necumal property, cancellation of elect, or combitations you made		on number (TIN) to report, for example, income paid to u in settlement of payment card and third party network	<ul> <li>An individual who is a U.S. citizen or U.S. resident alien,</li> <li>A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,</li> </ul>			
		reports, cancellation of debt, or contributions you made	<ul> <li>An estate (other than a foreign estate), or</li> <li>A demestic trust iss defined in Regulations section 301.7701-7).</li> </ul>			
to an IPA.  Use Form W-9 only if you are a U.S. person (including a resident allert), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:			Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding lits under section 1468 on any foreign partners' share of effectively connected toxobic income from such business. Further, in certain cases where a Form W-9 has not been recailed,			
<ol> <li>Certify that the TIN you are giving is correct (or you are waiting for a number to be issued).</li> </ol>			the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a			
2. Combit that you are not a blact to back a withholding or U.S. person that is a partner in a partnership conducting a trade of			g a trade or business in the			
annik	3. Giain comption from backup withholding if you are a U.S. corrept payer. If applicable, you are also extinting that as a U.S. person, your allocable share of any partnership income from a U.S. trade or backet and avoid section 1446 withholding on your share of partnership income.					

# **Telesofia Medical Ltd. Certificate of Incorporation**

